

# Partnership in Capacity Building with the BIPM

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# TÜBİTAK UME:

## Big strides in a short time

The “National Physics and Technical Measurement Standards Center” began operations in 226 m<sup>2</sup> of space consisting of two laboratories

- Establishment of “National Metrology Institute” - **UME**
- Autonomous facility w/ 7500 m<sup>2</sup> of space
- 40% of national demand met
- 116 staff members
- 1 500 calibrations performed
- Membership in EUROMET and EURACHEM

- Autonomous facility w/ 50000 m<sup>2</sup> of space
- 97% of national demand met
- 295 staff members
- 4 000 calibrations annually (~ 4 000 000 certificates by accredited labs in Turkey)
- Annual budget: 30 Million USD
- Membership in EURAMET, GULFMET, COOMET
- Services to 33 countries in 2017
- Significant high-level research activity (EMRP, EMPIR)

1986

1992-1998

2018

# TÜBİTAK UME: Commitment to Capacity Building



TÜBİTAK UME – Beneficiary of open knowledge sharing and CB activities by developed NMIs in early development

**Motivation:** To give back to metrology community, especially to developing NMIs

**Active involvement in EURAMET CB Activities since 2007:**

Focus Group on Facilitating National Metrology Infrastructure Development  
Convenorship of BoD – Working Group on Capacity Building (WGCB)



**Support of GULFMET's development as an RMO since 2012:**

Training, Comparisons, Heading of Technical Committees, etc.



**Early Contributions to BIPM CBKT:**

Support to "Metrology for Safe Food and Feed in Developing Economies"



# An Agreement with the BIPM



**November 2016:** TÜBİTAK UME proposed the idea to the BIPM to provide a long term training programme for researchers from developing NMIs at no cost as a CBKT activity in full cooperation with the BIPM

**February 2017:** During a visit by Dr. Martin Milton and Mr. Andy Henson, details were agreed to a two year programme called the **BIPM – TÜBİTAK UME Project Placements**

**July 2017:** Cooperation agreement was signed between BIPM and TÜBİTAK UME



# BIPM – TÜBİTAK UME

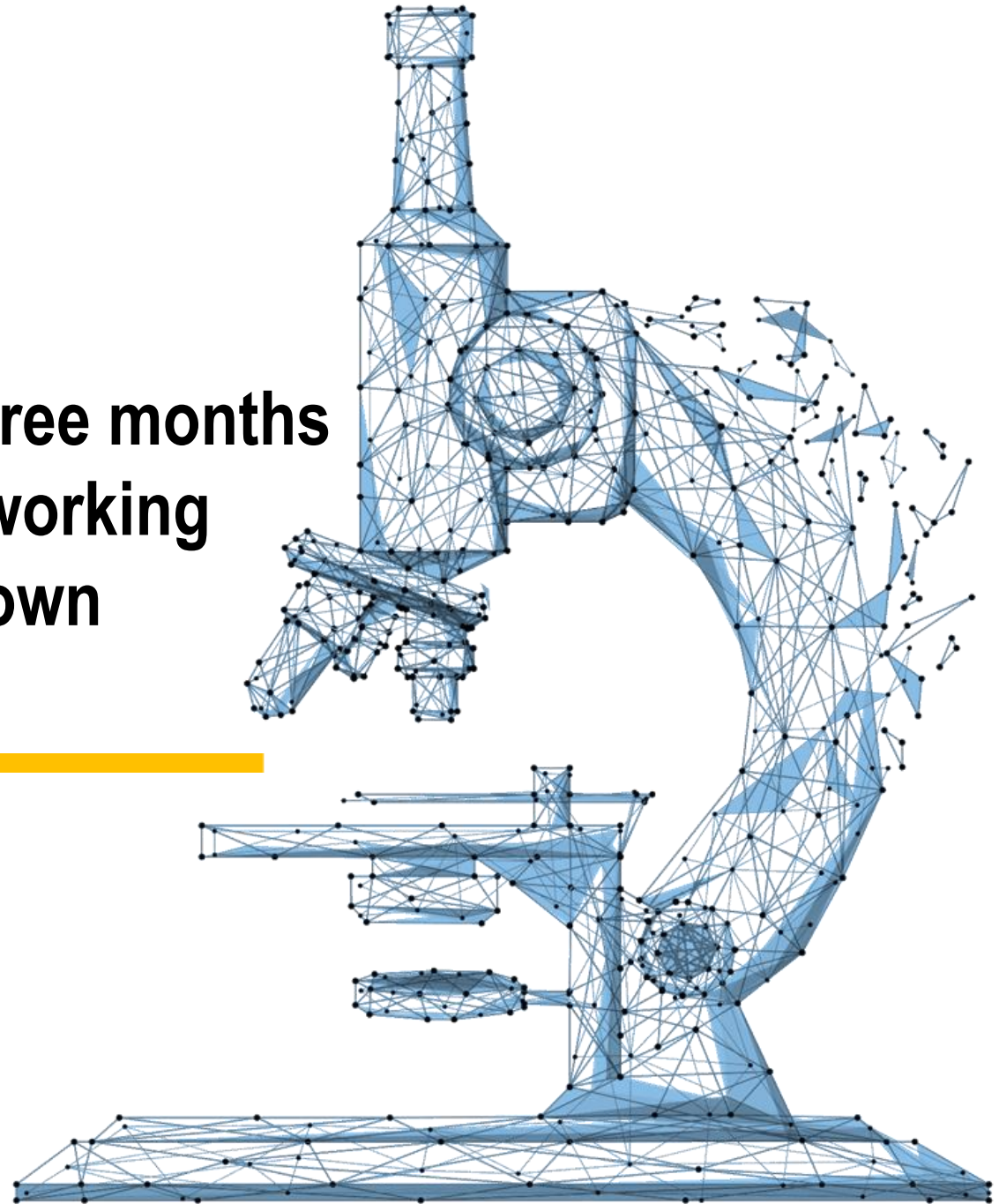
## Project Placements: Features

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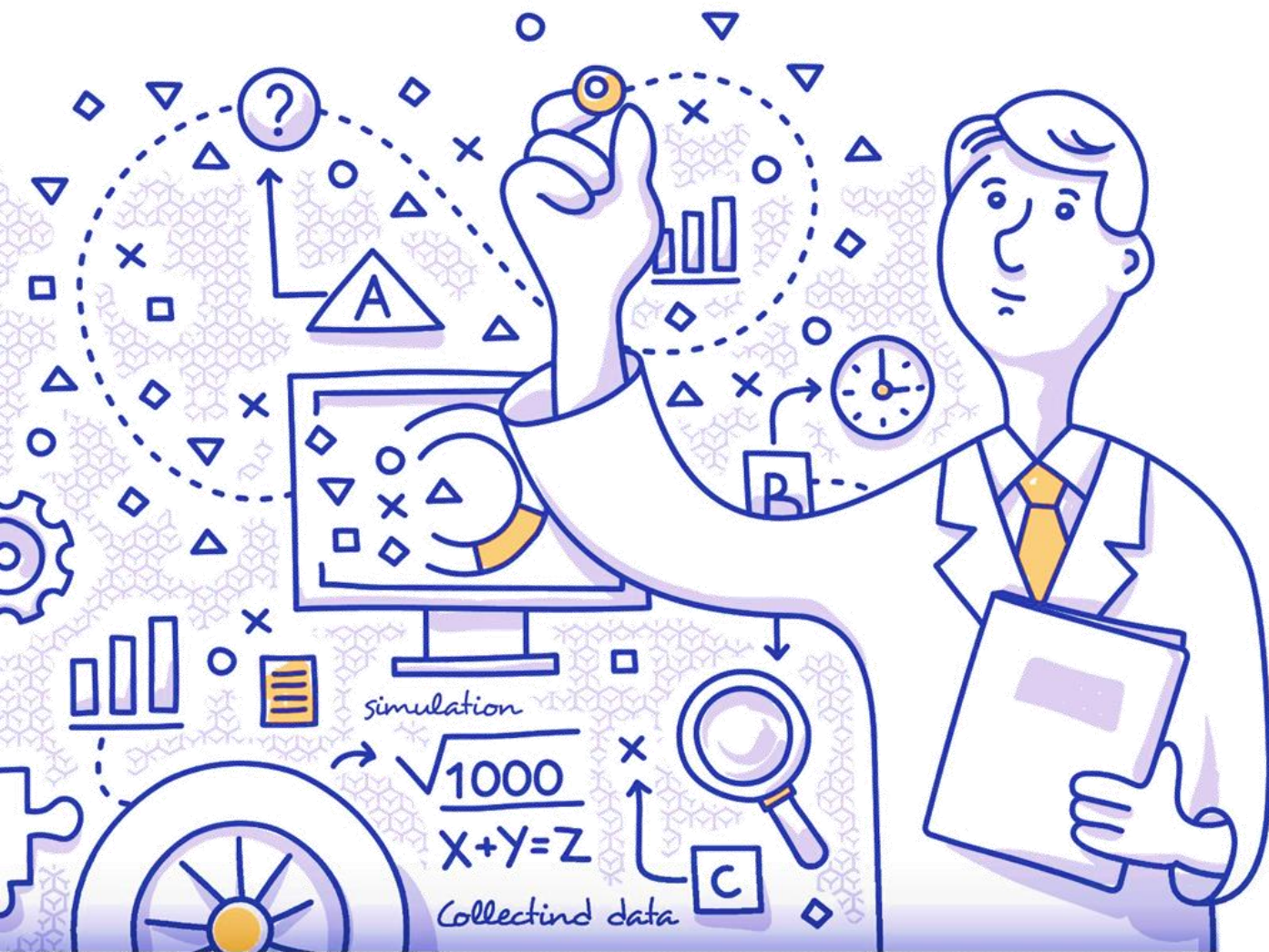


**Opportunity to spend one to three months  
in TÜBİTAK UME laboratories working  
on a research activity of ones own  
choosing**

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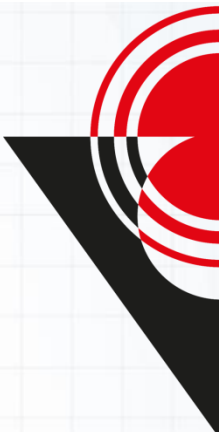
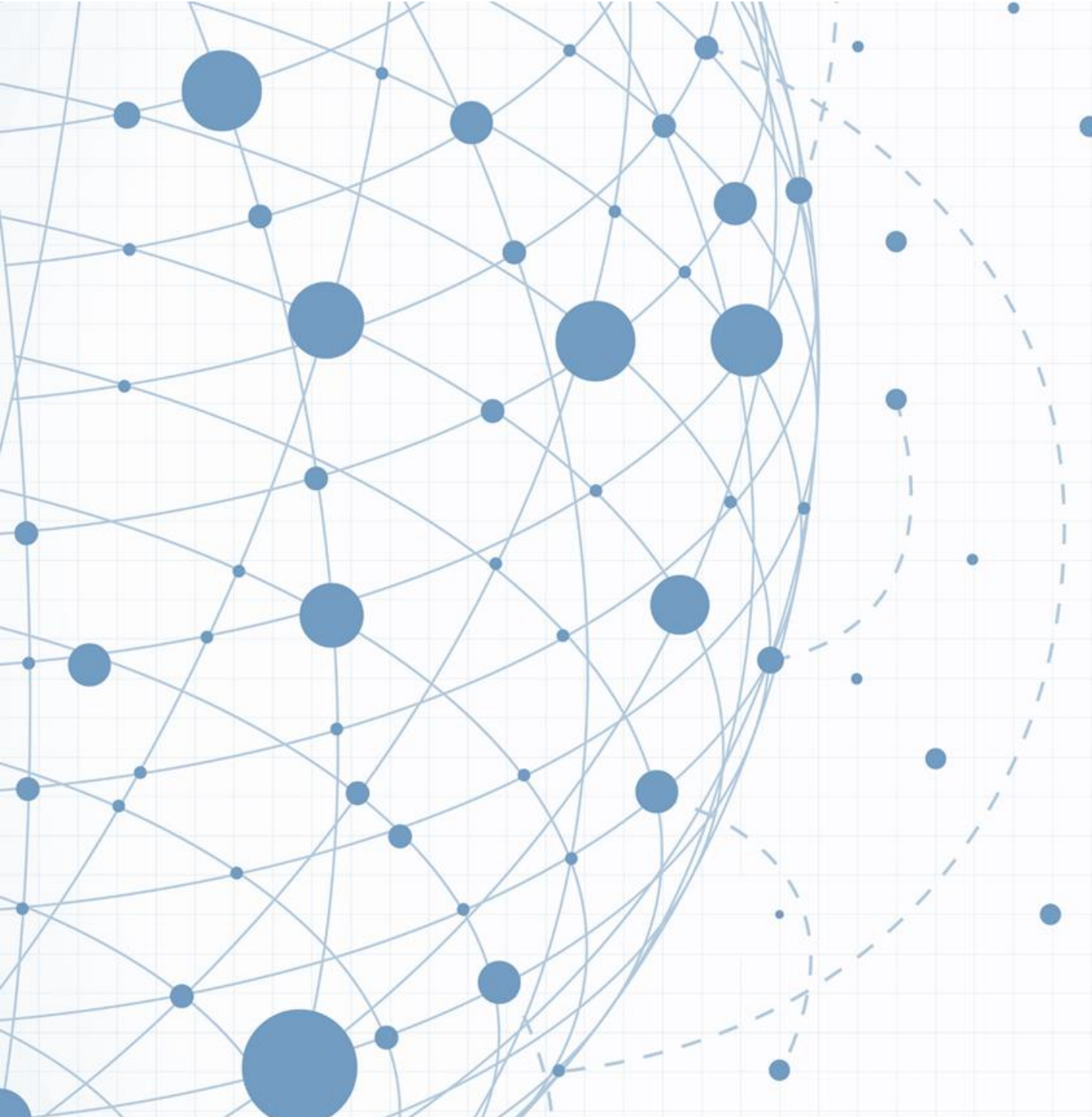




**Aimed at young NMI researchers  
from countries  
that have newly signed  
the CIPM MRA or will do  
so in near future**

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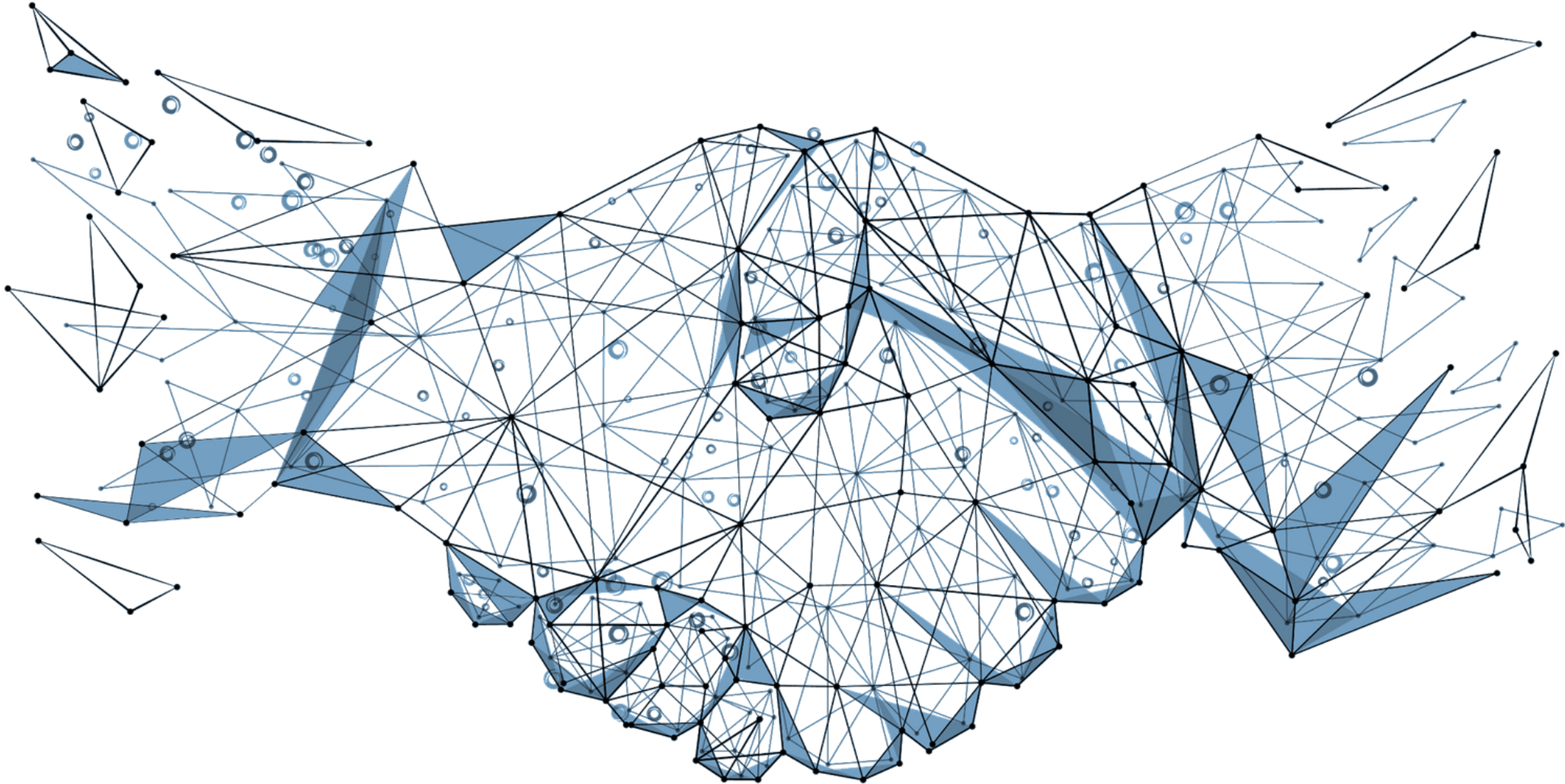


**Includes two-day workshop  
on the CIPM MRA  
and global quality infrastructure  
with instructors from the BIPM**

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**TÜBİTAK UME provides room and board**  
**Employer provides travel expenses & regular salary**

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# BIPM – TÜBİTAK UME Project Placements: First Cycle 2018

For the first cycle of the project placements in 2018, 53 applications were received from 23 countries

10 selected: 1 from EURAMET, 2 from COOMET, 2 from GULFMET, 4 from AFRIMETS, 1 from APMP countries

**Areas:** thermometry, electrical resistance, mass standards, voltage, RF and microwave, fluid flow, gauge block calibrations, 3D coordinate metrology, electrical power, and pressure

Trainee reports are now published on BIPM website!







# **BIPM – TÜBİTAK UME Project Placements: Feedback**







**«The programme... will enable the laboratory to participate in ILC and expedite declarations of CMCs. ... This was one of the best experiences in my career»**



**Merima Causevic from IMBiH (Bosnia – Herzegovina)**





«Useful for both me and my laboratory, the knowledge I gained will allow us to extend our capability to measure high DC resistance values»

«This Training has put me in the limelight as the key personnel responsible to develop procedures and work instruction for training of other West African metrologists in the ECOWAS region»

Frank Anang from **GSA** (Ghana)



**GHANA  
STANDARDS  
AUTHORITY**





«Training and seminars, and the vast experience transferred by colleagues at TÜBİTAK UME in practicing measurements and uncertainty calculations, make you feel more confident and perform measurements faster and better»



Elena Bayenskaya from **BelGIM** (Belarus)



# BIPM – TÜBİTAK UME Project

## Placements: Gains

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# Participants

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- Opportunity to study a subject of interest in depth with guidance from experienced laboratory staff and in well-equipped laboratories

- Chance to develop lasting professional relationships with metrologists from other NMIs with similar conditions

- Deploy knowledge and skills gained to improve home laboratory



- Opportunity to contribute to development of world metrology and cooperation between NMIs
- Showcase technical capabilities and infrastructure
- Foundation for greater cooperation with NMIs
- Improvement of teaching / mentoring skills of staff

**TÜBİTAK UME**

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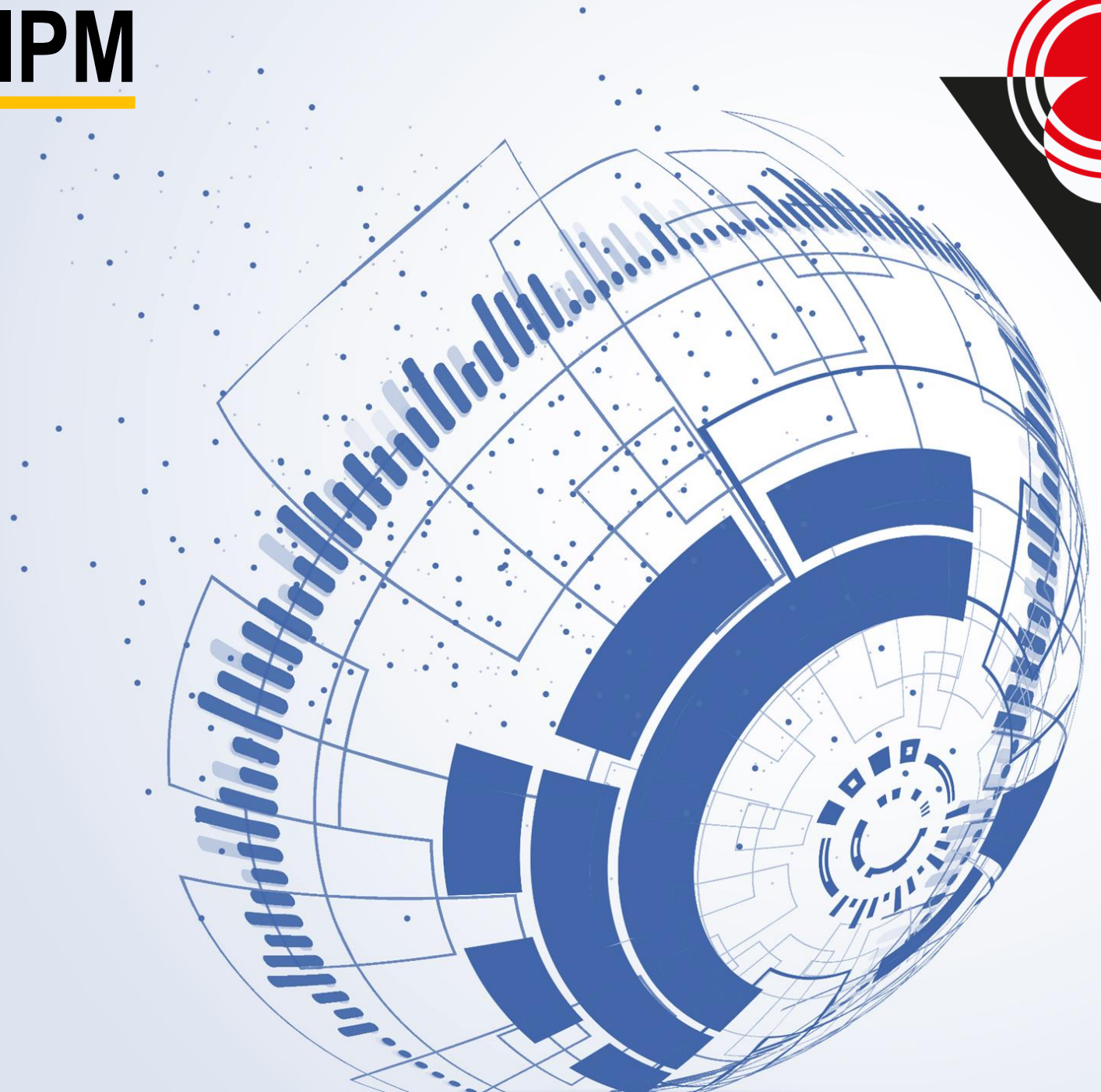
**Bureau**

♦ **International des**  
♦ **Poids et**  
♦ **Mesures**



- Support for the CBKT Programme
- Improve cooperation with emerging NMI and drawing them into further engagement in world metrology system

**BIPM**





# BIPM – TÜBİTAK UME Project Placements: Second Cycle 2019

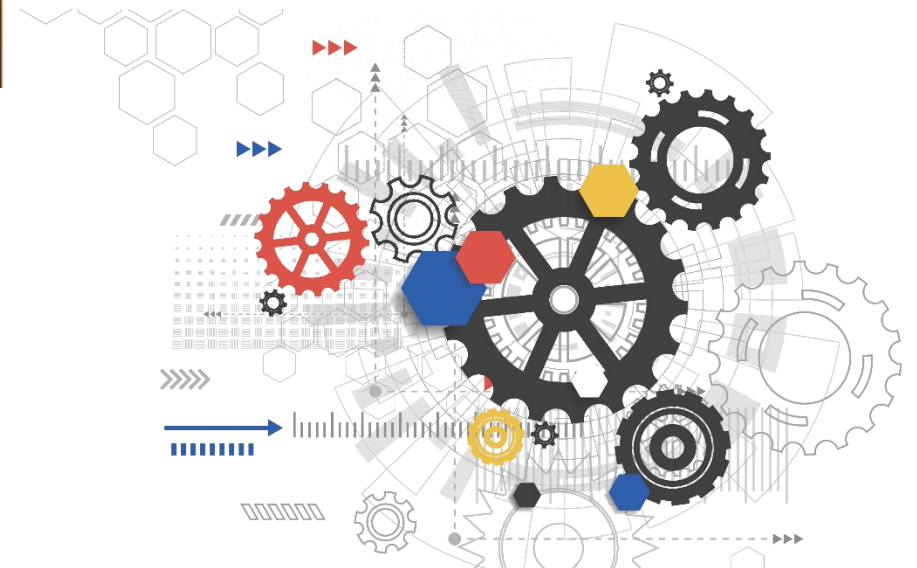


Applications for the second cycle of the programme are now open at:  
<https://www.bipm.org/en/cbkt/tubitak-project-placements.html>

The deadline for applications in **28 November**  
Successful applicants will be notified by **12 December**  
The programme will commence on **1 March 2019**

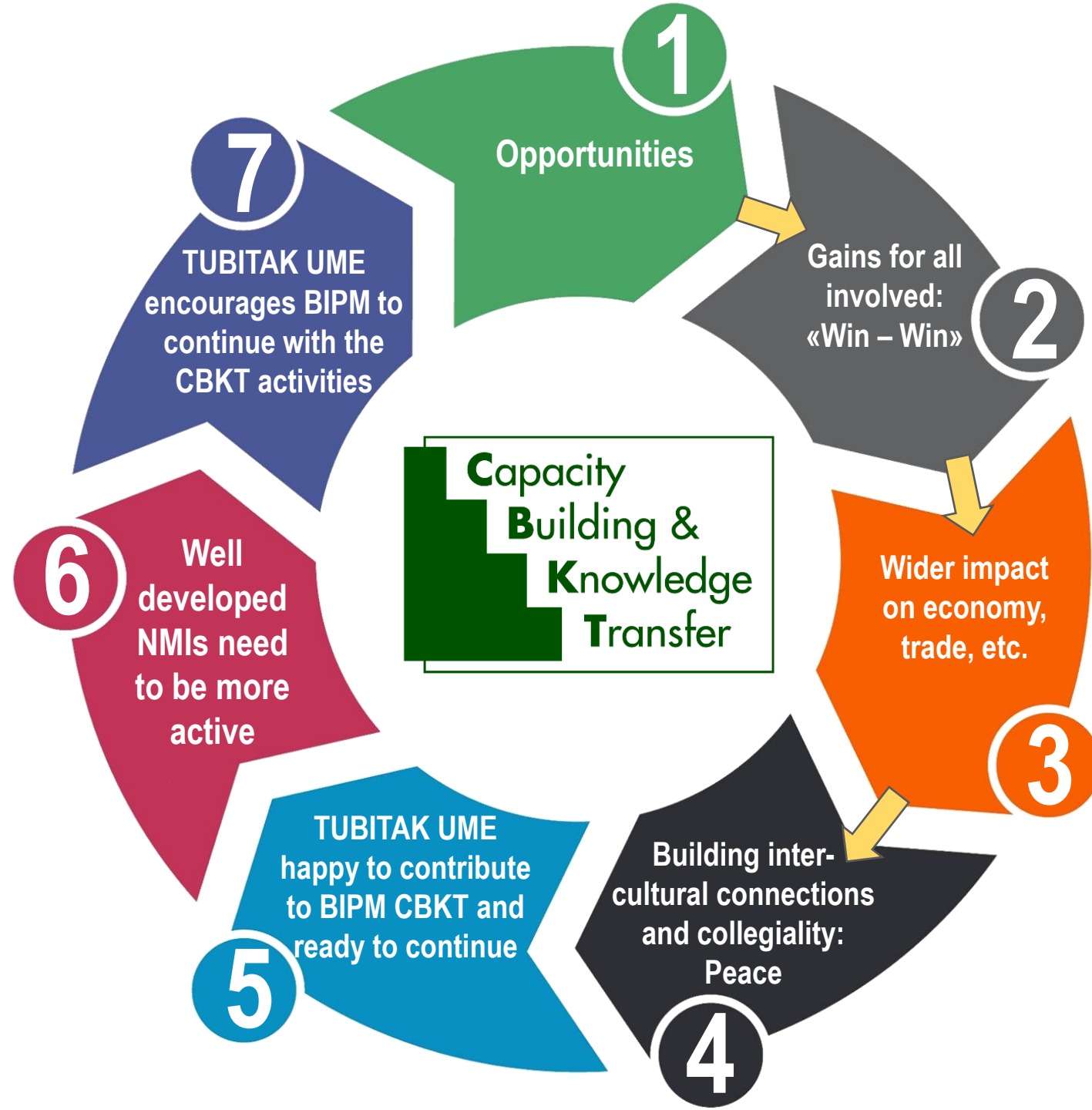
Applicants may propose any technical field of study in metrology that can be accommodated in TÜBİTAK UME's laboratories.

Length of stay will be determined in consultation with laboratory and also depend on applicants' circumstances.

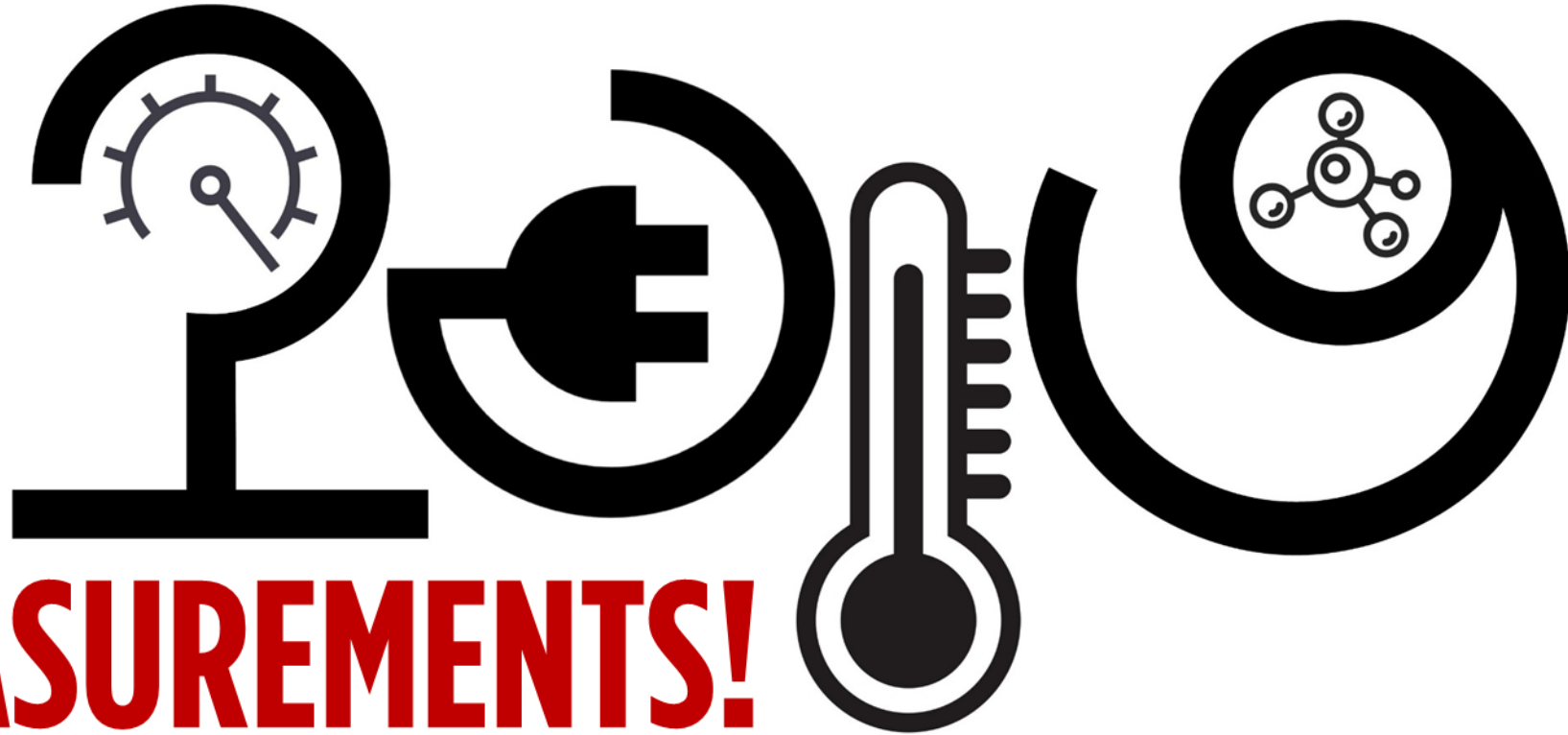


# Conclusion

**INFORMATION  
/KNOWLEDGE  
INCREASES  
WHEN  
IT IS  
SHARED**



# CHANGE THROUGH



# MEASUREMENTS!

TRUE  
MEASUREMENT  
EXCELLENCE